

CLAIMS

What is claimed is:

1. A heating crucible for a deposition apparatus, comprising:
a main body having a space which receives an organic compound and a nozzle through which the organic compound, vaporized, is discharged; and
an inner member installed within the main body and having one or more openings formed around an edge of an area thereof facing the nozzle so as to transmit the vaporized organic compound.
2. The heating crucible of claim 1, wherein:
the inner member further comprises a baffle board formed on the area facing the nozzle,
and
the openings are formed around an edge of the baffle board.
3. The heating crucible of claim 2, wherein the inner member further comprises at least one fixing portion which extends upward from the baffle board and supports the baffle board.
4. The heating crucible of claim 2, wherein the inner member further comprises at least one fixing portion which extends downward from the baffle board and supports the baffle board.
5. The heating crucible of claim 1, wherein the openings are continuously or discontinuously formed along the edge of the inner member.
6. The heating crucible of claim 1, wherein the openings are formed at regular intervals around the edge of the inner member.
7. The heating crucible of claim 1, wherein the sum of areas of the openings of the inner member is equal to or greater than an area of the nozzle.

8. The heating crucible of claim 1, wherein a distance between the nozzle and the inner member is from a radius of the nozzle to 9/10 of a distance between the nozzle and an inner bottom surface of the main body.

9. The heating crucible of claim 1, wherein the main body comprises a cap on which the nozzle is formed and a main body part in which the space is formed.

10. The heating crucible of claim 1, further comprising a heater which is provided to the main body and/or the nozzle.

11. A deposition apparatus for forming a deposition film on a substrate, comprising:
a vacuum chamber which receives the substrate ; and
a heating crucible which is installed opposite to the substrate and vaporizes an organic compound provided thereto, wherein the heating crucible comprises:

a main body having a space which receives the organic compound and a nozzle through which the organic compound, once vaporized, is discharged, and
an inner member installed within the main body and having one or more openings formed around an edge of an area thereof facing the nozzle so as to transmit the vaporized organic compound.

12. The deposition apparatus of claim 11, wherein:
the inner member further comprises a baffle board formed on the area facing the nozzle,
and
the openings are formed around the edge of the baffle board.

13. The deposition apparatus of claim 12, wherein the inner member further comprises at least one fixing portion which extends upward from the baffle board and supports the baffle board.

14. The deposition apparatus of claim 12, wherein the inner member further comprises at least one fixing portion which extends downward from the baffle board and supports the baffle board.

15. The deposition apparatus of claim 11, wherein the openings are formed at regular intervals around the edge of the inner member.

16. The deposition apparatus of claim 11, wherein the sum of areas of the openings of the inner member is equal to or greater than an area of the nozzle.

17. The deposition apparatus of claim 11, wherein a distance between the nozzle and the inner member is from a radius of the nozzle and 9/10 of a distance between the nozzle and an inner bottom surface of the main body.

18. The deposition apparatus of claim 11, wherein the main body comprises a cap on which the nozzle is formed and a main body part in which the space is formed.

19. The deposition apparatus of claim 11, wherein the heating crucible further comprises a heater which is provided to the main body and/or the nozzle.

20. The deposition apparatus of claim 11, wherein the inner member is one of an inner plate having one continuous opening formed around an edge of an area thereof, and an inner plate having a plurality of openings formed at a predetermined intervals around an edge of an area thereof.

21. The heating crucible of claim 1, further comprising a temperature sensing unit which senses a temperature of the organic compound.

22. The heating crucible of claim 1, wherein:
the inner member further comprises a baffle board formed on the area facing the nozzle,
and
the baffle board is narrower than a sectional area of the space.

23. The heating crucible of claim 1, wherein the opening has a predetermined area so as to prevent a pressure difference between a space below the inner member and a space above the inner member.

24. The heating crucible of claim 1; wherein the nozzle has a vertical axis that does not match with that of the opening so as to prevent the organic compound, in a predetermined form, from being transmitted through the nozzle.

25. The heating crucible of claim 1, wherein:
the inner member further comprises a baffle board formed on the area facing the nozzle,
and
the baffle board blocks the organic compound, in a form of a lump, from being transmitted through the nozzle.

26. The heating crucible of claim 1, wherein the inner member has a cross-section that is substantially the same as that of the space of the main body.

27. A heating crucible for a deposition apparatus, comprising:
a main body having a space defined to receive an organic compound and a nozzle through which the organic compound is discharged; and
an inner member having at least one opening, which is installed within the main body to face the nozzle and control a transmittance of the organic compound, through the nozzle, having a predetermined form.

28. The heating crucible of claim 27, wherein the inner member prevents the organic compound, in a form of a lump, from being transmitted through the nozzle.

29. The heating crucible of claim 27, wherein the opening has an area equal to or greater than that of the nozzle.

30. The heating crucible of claim 27, further comprising a heater which vaporizes the organic compound.

31. The heating crucible of claim 30, wherein the heater is integrated or provided to the main body and/or the nozzle.

32. A method of producing an electroluminescent (EL) device having an organic compound, the method comprising:

obtaining a substrate of the EL device; and

depositing a layer of the organic compound on the substrate using a deposition apparatus having a heating crucible including a main body which receives the organic compound, a nozzle provided to the main body, and an inner member having at least one opening which is installed within the main body to face the nozzle and transmit the organic compound having a predetermined form.

33. The method of claim 32, wherein the inner member prevents the organic compound, in a form of a lump, from being deposited on the substrate.